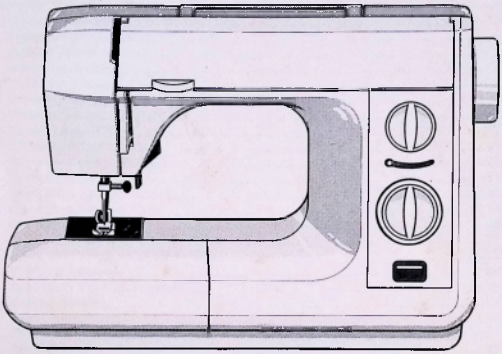


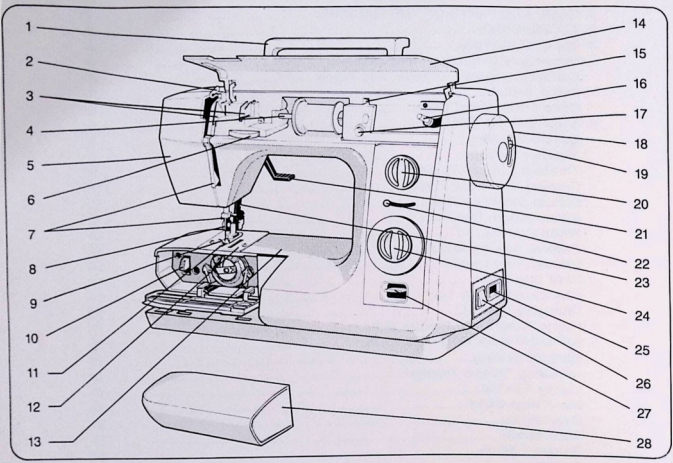
Model 3207/3214

SINGER

TABLE OF CONTENTS

1. NAME AND PARTS OF THE MACHINE 1
2. ACCESSORIES 2
3. BEFORE SEWING 3
   - Detachable Extension Table (Accessory Box) 3
   - Connecting Foot Controller and Power Cord 4
   - Power Switch 4
   - Open Stitch Panel Cover 4
4. STARTING TO SEW 5
   - Bobbin Winding 5
   - Inserting Bobbin 7
   - Threading Upper Thread 8
   - Drawing Up Lower Thread 10
   - Pattern Selection Dial 11
   - Stitch Length Dial 12
   - Width Control 12
   - Reverse Sewing Button 13
   - Presser Foot Lever 14
   - Feed Dog Lever 14
   - Changing Presser Foot 15
   - Changing Needle 16
   - Fabric Thread and Needle Table 17
5. APPLICATIONS AND METHODS 18
   - Straight Sewing 18
   - Adjusting Thread Tension 18
   - Zigzag Sewing 18
   - Blind Hem Stitch 19
   - Overcasting 21
   - Shell Stitch 21
   - Rampart Stitch 22
   - Couching 22
   - Overlocking 23
   - Stretch Stitching 24
   - Adjusting Stretch Stitch Balance 24
   - Ric-Rac/Straight Stretch Stitch 25
   - Turkish Stitch 25
   - Buttonholes 26
   - Sewing Buttons On 29
   - Mending 30
   - Sewing Zippers 31
   - Roll Hemming 32
   - Twin Needle 33
   - Decorative Tucks 33
   - Pin Tucking 34
   - Quilting 35
   - Smocking 36
   - Applique Work 37
   - Embroidery 38
6. MAINTENANCE 39
   - Cleaning 39
   - Oiling 39
   - Cleaning Shuttle Case 40
   - Changing Light Bulb 40
   - Lower Tension Adjustment 41
7. TROUBLE CHART 43

1. NAMES AND PARTS OF THE MACHINE



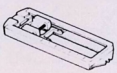
1. Handle
2. Take-up lever
3. Thread guide for bobbin winding
4. Spool pin
5. Face cover
6. Upper thread tension dial
7. Thread guide for upper threading
8. Presser foot thumb screw
9. Presser foot
10. Drop feed lever
11. Feed dog
12. Needle plate
13. Free arm
14. Stitch panel cover
15. Square hole for extra spool pin
16. Bobbin winding spindle
17. Thread guide for bobbin winding
18. Handwheel
19. Declutch button
20. Stitch length dial
21. Presser foot lifter
22. Width control
23. Thread cutter
24. Pattern selection dial
25. Socket
26. Switch
27. Reverse sewing lever
28. Extension table (Accessory box)

2. ACCESSORIES

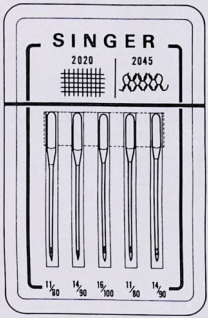
Zigzag foot (on machine)

Bobbins (3 pcs.)

Buttonhole Foot



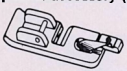
Needles



Zipper foot

* **Optional accessory (Model 3207 only)**

Roll hemming foot



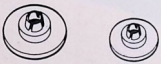
Button sewing foot

Quilting guide

* **Optional Accessory**

Twin needle

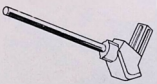
Spool cover



(large) (small)

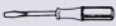
Needle plate driver

Extra spool pin (second)

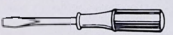


Screw drivers

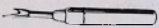
(small)



(large)



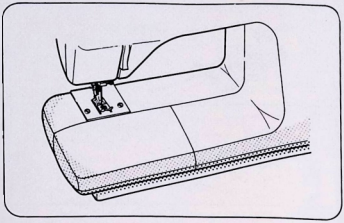
Buttonhole cutter



Oiler

3. BEFORE SEWING

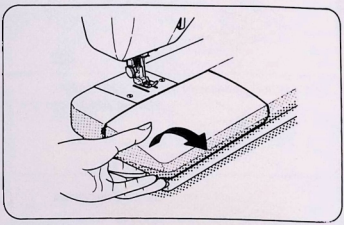
The machine is stored in flat-bed style which makes sewing easier.



Detachable Extension Table

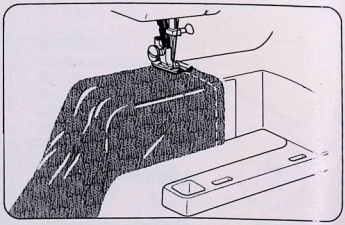
By removing the accessory box from the machine, the machine can be used as a free-arm machine.

To remove, simply lift box straight up and away from machine.

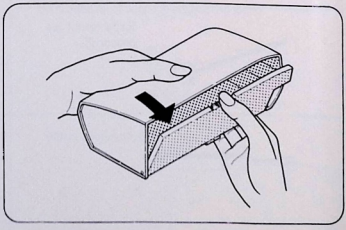


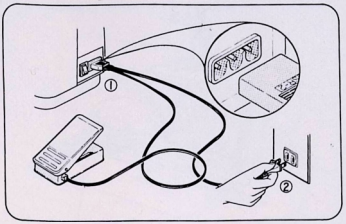
Sewing sleeves of T-shirts and blouse or cuffs of trousers is easier with the free-arm.

Reverse procedure to attach extension table, and snap into place.



To open lid of accessory box pull it open, as illustrated.

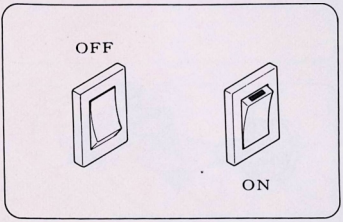




Connecting Foot Controller and Power Cord

Connect foot controller and power cord ① ②.

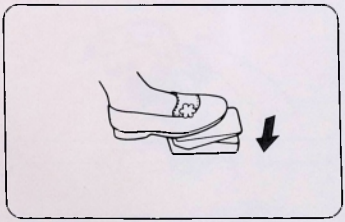
Before plugging in your machine, be sure that the voltage is the same as your machine (written on a plate at back of machine).



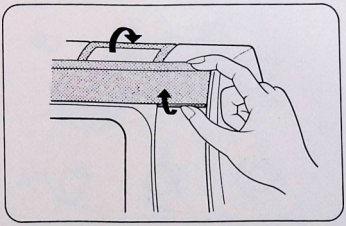
Power Switch

Switch on, turns the power and the sewing light on.

Switch off, turns the power and the sewing light off.



The more you press foot controller, the fast[illegible] the machine runs.



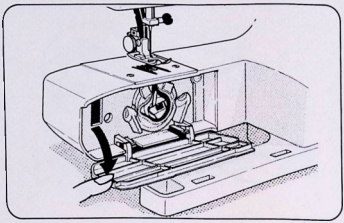
To Open Stitch Panel Cover

Press cover on top with index finger. Lift cover with thumb and flip open to full extended position. Lower carrying handle if necessary.

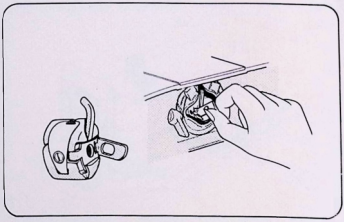
4. STARTING TO SEW

Bobbin Winding

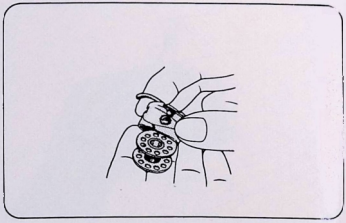
Set needle in the highest position by turning handwheel towards you.
Remove accessory box to locate bobbin case.
Open shuttle cover.



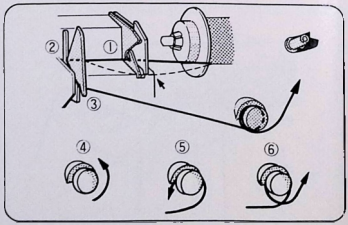
Open latch of bobbin case and remove case.

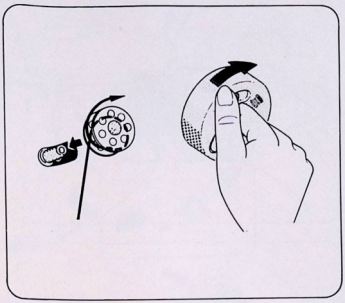


Close latch of bobbin case and bobbin comes out easily.



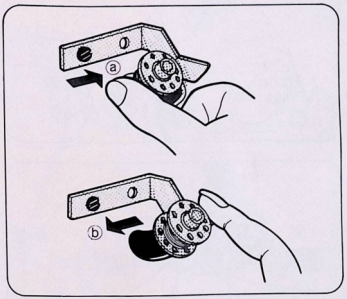
Put thread on spool pin. (See page 8) Draw thread from spool pin through thread guide and pretension device, following numbers ④, ⑤ and ⑥.





Wind thread clockwise around bobbin several times.
Place bobbin on bobbin winding spindle.

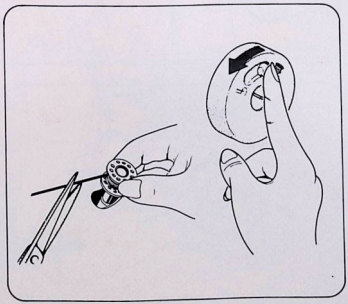
Move the declutch button on handwheel into the direction.



ⓐ Push bobbin to right and press down on foot controller.

Machine stops automatically when bobbin is full.

ⓑ Push bobbin to left, to disengage from wheel.

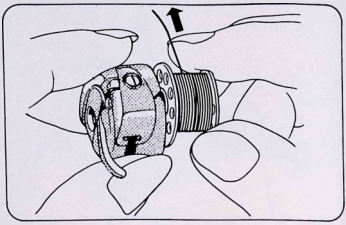


Take the bobbin off the spindle and cut thread.

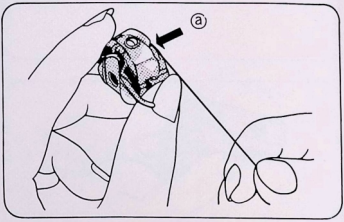
Move the declutch button on handwheel into the direction.

Inserting Bobbin

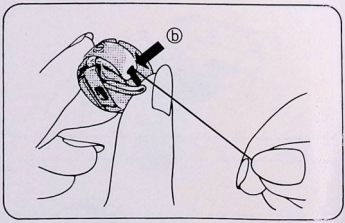
Place bobbin in its case with thread running clockwise.



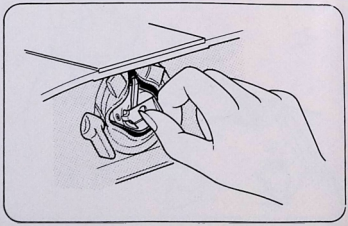
Guide thread into slot ⓐ of bobbin case.

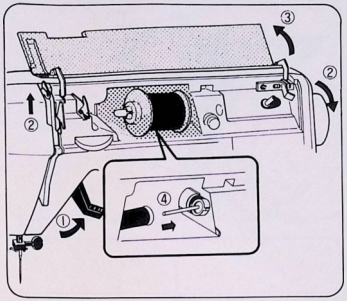


Pulling thread to left, bring it under tension spring then to delivery eye ⓑ .



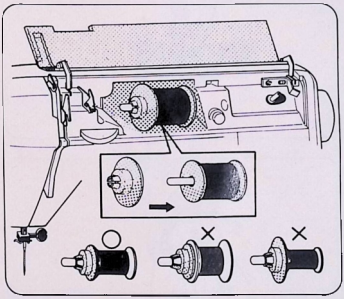
Raise needle to the highest position.
Leave end of thread about 10 cm (4") from bobbin case.
Take hold of latch and push bobbin case into shuttle. Release latch when bobbin case is fully inserted.





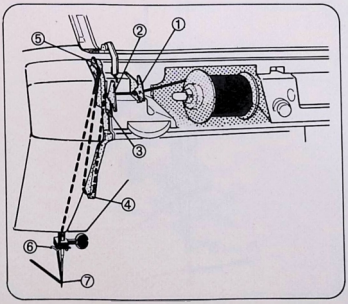
Threading Upper Thread

1. Raise presser foot.
2. Set take-up lever to the highest position by turning handwheel towards you.
3. To locate spool pin, open stitch panel over. Lift cover with thumb and flip open to full extended position.
   Lower carrying handle if necessary.
4. Pull spool pin towards you and place a spool of thread on pin.
5. Slide spool cover onto spool pin, as illustrated and replace to original position.



Use the large spool cover for larger spools and use the small cover for smaller spools.

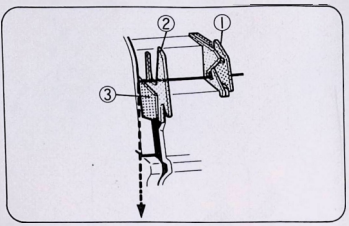
* If you use small spool cover for bigger spool, upper tension may be unbalanced and, sometimes, will cause skipping or thread breakage.



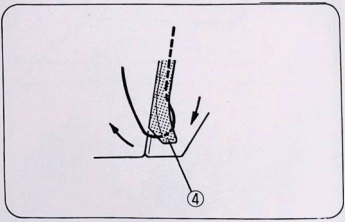
Thread, machine in accordance with instructions on next page, following steps ① – ⑦.

Pass thread through lower guide ① to ②.

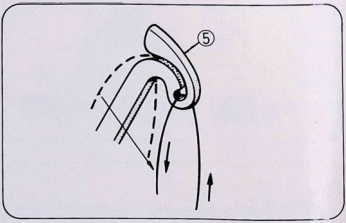
Lead thread through either side of tension plate ③.



Pulling thread down, pass thread around lower guide ④ from right to left.

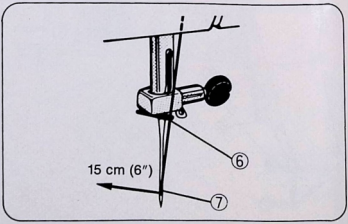


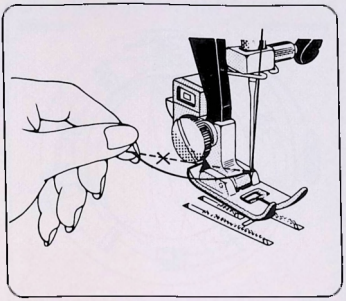
Continue pulling thread up and slide thread through take-up lever ⑤.



Pass thread to needle guide ⑥ (use left one) then to needle eye ⑦ and thread from front to back.

Allow about 15cm (6") of extra thread.

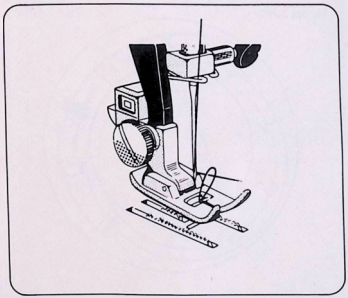




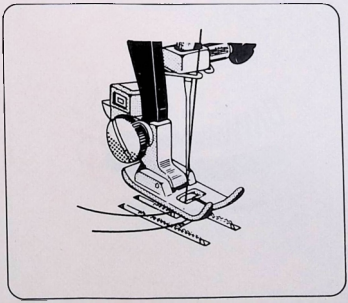
Drawing Up Lower Thread

Hold end of upper thread with left hand as illustrated.

Turn handwheel slowly towards you until needle moves down and up again to its highest position.



Pull upper thread slowly and lower thread will be brought up in a loop.



Pull both threads out about 15 cm (6") and place them together under presser foot on left.

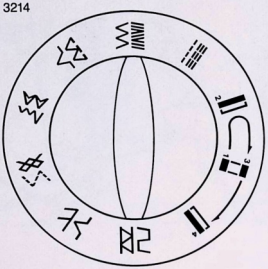
Pattern Selection Dial

The desired stitch will be obtained by turning the stitch selector dial. It can be turned either to the right or to the left.
Note: When operating selector, make sure needle is in the highest position.

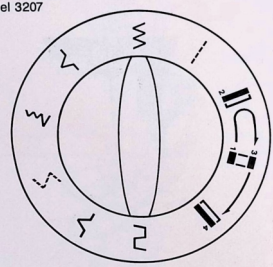
The stitches are as shown on the dial.

* Always make sure needle is in the highest position when operating dial.

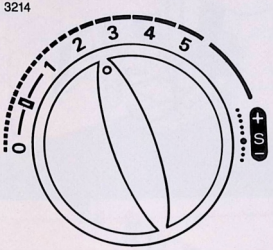
Model 3214



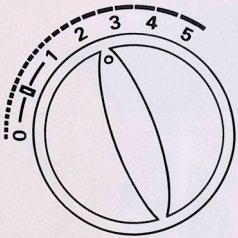
Model 3207



Model 3214



Model 3207



Stitch Length Dial

For a longer stitch, turn dial to right, For a shorter stitch, turn it to left.

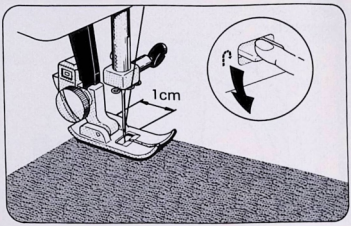
For normal sewing it is set between 2 and 3.

Width Control

To set control at required stitch width, slide lever to the right. Continue to move lever to the right for maximum stitch width.
Slide lever to the left for straight stitching.
Make sure needle is in the highest position when you set control.

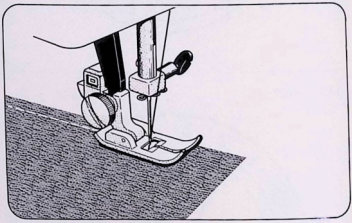
Reverse Sewing Button

(Starting A Seam)
Place fabric under foot about 1 cm (0.4") inside the edge.
Lower presser foot lever.

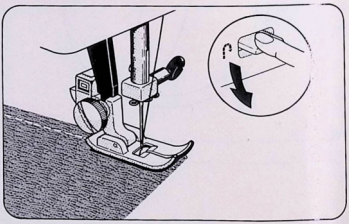


(Reverse Sewing)
To reinforce seam, sew backwards to the edge of fabric by pushing reverse sewing button down.

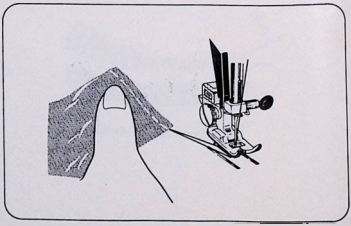
Release button and continue sewing guiding fabric by hand as it is fed.
Never pull material.

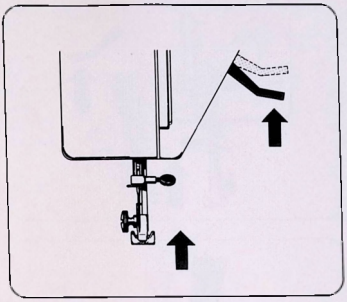


(Finishing A Seam)
Sew reverse stitches for reinforcement at end of seam.



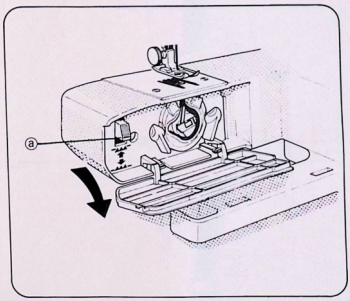
Draw fabric to left when sewing is finished.





Presser Foot Lever

In order to obtain a larger opening when using very thick materials, firmly push presser foot lever up as far as it will go.



Feed Dog Lever

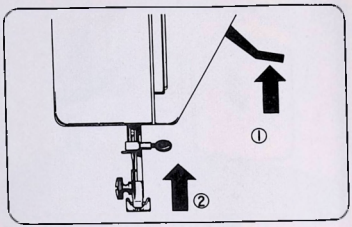
To prevent machine from feeding the fabric the feed dog must be lowered. This is used for sewing on buttons, darning and embroidery.

Remove accessory box and open shuttle cover. To lower feed dog, push lever ⓐ to ▲▲▲ position. For normal sewing, push the lever to ▲▲▲ position.

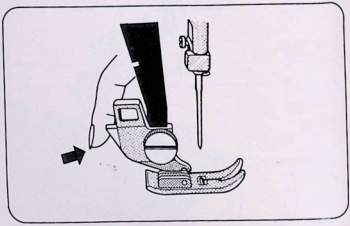
Changing Presser Foot

Raise presser foot lever.

Set needle in the highest position by turning handwheel towards you.

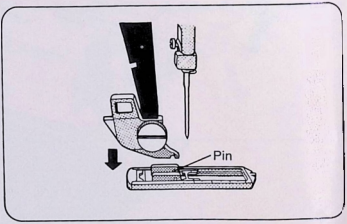


a Push red button on the back of presser foot and the foot will come off.



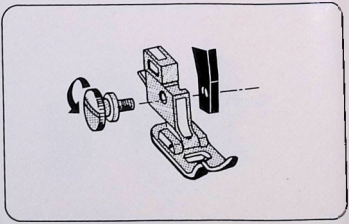
b To position a new foot, align holding groove of shank with pin of foot.

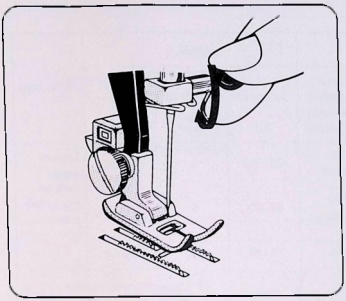
Lower presser foot lifter so that holder catches presser foot.



Removing Presser Foot Shank

Remove presser foot shank by loosening thumb screw.

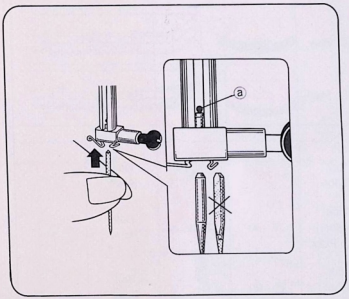




Changing Needle

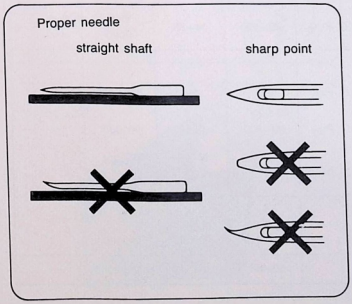
Set needle in the highest position by turning handwheel towards you.

Loosen needle clamp screw and remove needle.



With flat side away from you, insert a new needle.

Push needle into clamp until it reaches stopper (a) and tighten needle clamp screw firmly.

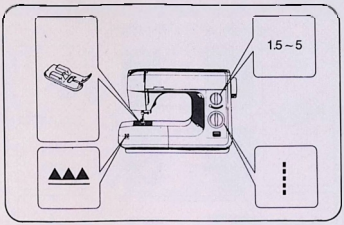


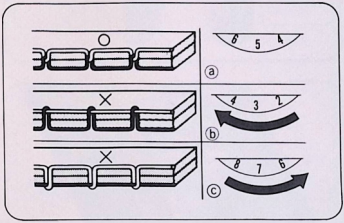
Always use a straight needle with a sharp point. For best results use SINGER branded needles.

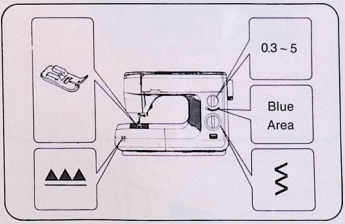
Using defective or worn needles not only causes skipped stitches, breakage of needles or snapping of thread; it can also damage shuttle and needle plate.

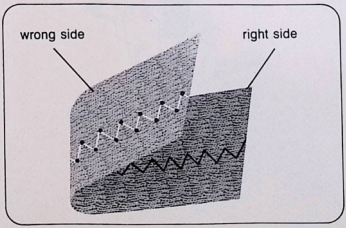
Fabric, Thread and Needle Table

FABRIC	THREAD			NEEDLE			REMARKS
	European Cotton	Mercerized Cotton	Cotton Covered Polyester, Silk, Nylon	European 705	U.S. Size 15x1	Point Style	
VERY SHEER; Lace, Voile, Chiffon, Net	70	60	Silk Nylon	65–70	9	Regular	Loosen upper tension one or two points .....
SHEER; Blouse Crepe, Lawn, Organdy, Taffeta	50–70	60	Silk Nylon	65–70	9	Regular	
LIGHT-WEIGHT; Crepe Wool, Brocade, Velvet	30	50	Silk	75–80	11	Regular	
MEDIUM; Wool, Silk, Linen,Velveteen, Cotton Faille, Terrycloth	30	50	Silk	80–90	11–14	Regular	
HEAVY; Denim, Duck, Sailcloth	30	Heavy Duty	C.C. Poly	100	16	Regular	
EXTRA HEAVY; Upholstery Canvas, Awning	30	Heavy Duty	C.C. Poly	120	19	Regular	
KNITS							
LIGHT-WEIGHT; Tricot	50–70	60	Silk Nylon	70	9	Ball Point	
MEDIUM-WEIGHT; Jersey, Double Knit,	30	50	Silk Nylon C.C. Poly	70–80	9–10	Ball Point	
HEAVY-WEIGHT; Double Knit	30	50	Silk Nylon C.C. Poly	80–90	11–14	Ball Point	
FAKE FURS, VELOURS	30	Heavy Duty	C.C. Poly	90–100	14–16	Ball Point	
LEATHER							
VINYLS	30	50	C.C. Poly	90	14	Wedge	
LIGHT-TO-MEDIUM-WEIGHT	30	50	C.C. Poly	90–100	14-16	Wedge	
HEAVY LEATHER	30	Heavy Duty	C.C. Poly	100–110	16–18	Wedge	
DECORATIVE TOUCHES							
TOP STITCHING	Silk twist			100–110	16–18	Regular	
MACHINE EMBROIDERY	Size 50–70			65–80	9–11	Regular	









5. APPLICATIONS AND METHODS

Straight Sewing

Set machine as shown.

Adjusting Thread Tension

Check if upper and lower thread tension is equal and strong enough to lock both threads in center as figure ⓐ .

If upper tension is too tight, the upper thread will lie straight along the upper surface of the fabric ⓑ . Correct by turning tension dial to the left.

If upper tension is too loose, the lower thread will lie straight along, the lower surface of the fabric ⓒ . Correct by turning tension dial to the right.

* Always check the balance of upper and lower tensions before sewing garment. Use the same fabric, needle, thread and stitch pattern you plan to use.

Zigzag Sewing

Set machine as shown.

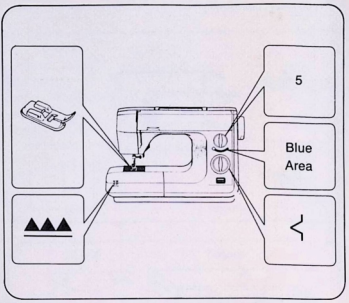
To prevent seam ends from unravelling set machine for straight stitch and sew in reverse at beginning and ending of seam.

Thread Tension for Zigzag Stitch

Loosen upper thread tension for a better-looking zigzag stitch.

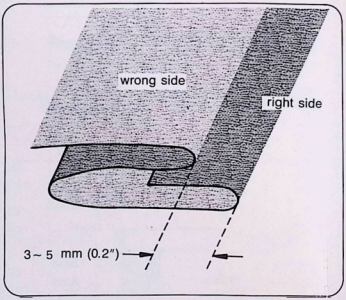
Blind Hem Stitch

Set machine as shown.

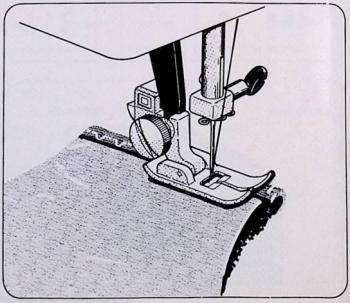


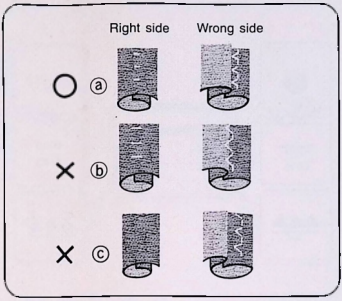
Fold material as shown and place under foot.

For a neater finish, it is preferable to baste or iron the hem beforehand.

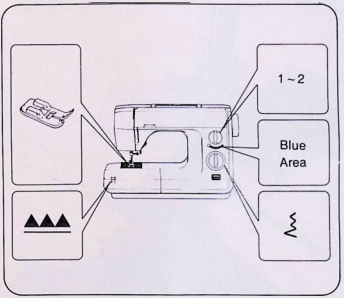


Sew carefully, so that straight stitches are made on hem edge, and slanting stitches pierce only one or two threads of fold.





ⓐ Correct seam.
ⓑ Needle is catching edge of fold too much.
ⓒ Needle is not catching edge of fold at all.

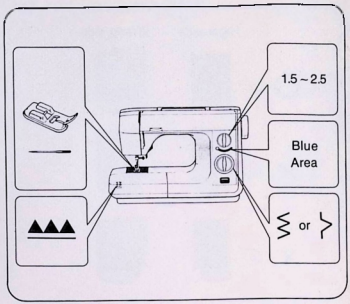


Stretch Blind Hem Stitch

For stretch materials, set machine as shown and sew in the same way as for normal blind hem stitch.

Overcasting

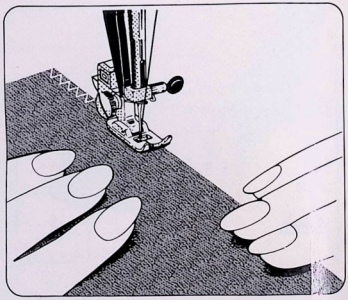
For light weight material:
Set machine as shown.



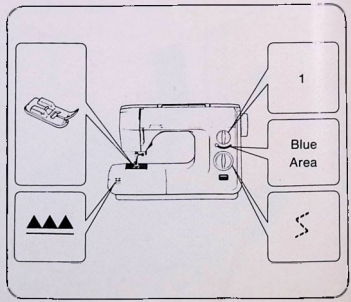
Sew carefully so that all stitches on right side are flush with edge of fabric.

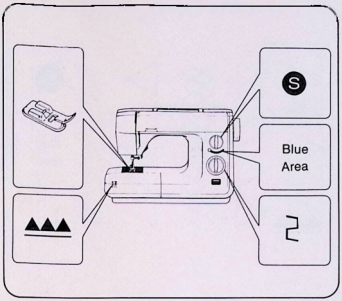
Shell Stitch

Use this stitch for a decorative edge on light weight fabric.
Sew, so that the right side stitches drop outside the edge of material.



For thick and elastic material:
Set machine as shown.
Sew in the same way above.





Rampart Stitch

This stitch can be used as a decorative edge or for couching.

Set machine as shown.

Couching

Couching is an embroidery technique in which stitches are sewn over cording, yarn or braid. Borders and edges may be made more attractive by couching a decorative yarn or braid with an open-spaced stitch pattern, or by using the twin needle.

Open stitch patterns include the Blindstitch. "M" Stitch,Rampart stitch and Zig-Zag stitch.

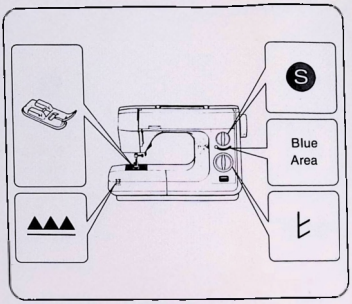
They are most appropriate for couching, since they let the decorative cord show as part of the work.

The RAMPART STITCH can also be used to decorate a boy's cap.

Overlocking

(For model 3214 only)
Overlocking stitches make it possible to sew and overcast seams at the same time.

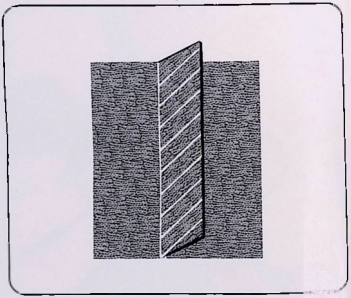
Set machine as shown.

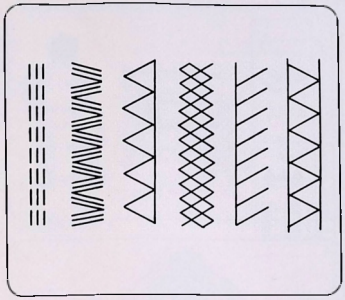


Put two pieces of cloth together with right sides together and sew.

To prevent edges from fraying sew so that right side stitches drop outside the edge of material.

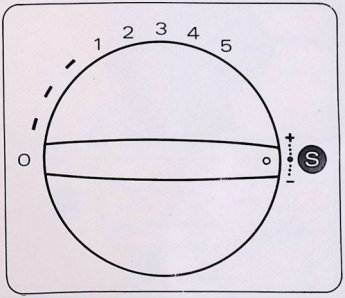
In some cases overlocking stitches can be used for overcasting.





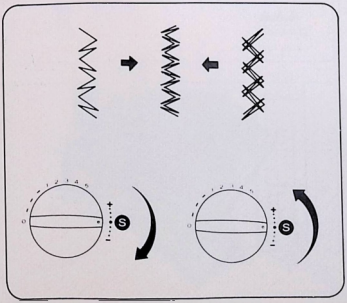
Stretch Stitching

(For model 3214 only)
The stitches shown are all used with stretch and knit fabrics as well as for decorative edgings. These are special utility stitches built into the machine for your quick selection.



Adjusting Stretch Stitch Balance

(For model 3214 only)
In stretch stitch sewing, the stretch stitch adjuster should usually be in a neutral position (between "+" and "−").
When sewing some fabrics, you may need to adjust this control to balance the stitches.



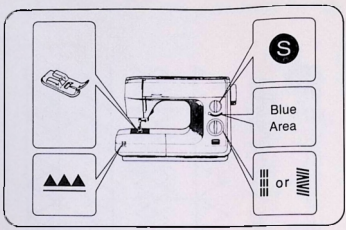
If design seems open like the illustrations to the le adjust the control slightly toward "−" until de looks like the center design.

If the design appears to be closed as in the righ hand illustrations, turn the control toward "+" until stitching is as you desire.

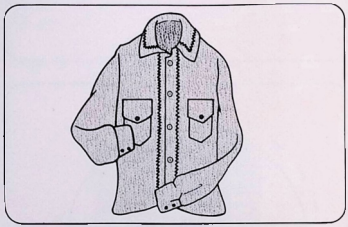
Ric-Rac /Straight Stretch Stitch

(For Model 3214 only)
This is a heavy-duty, stretch stitch that can also be used for topstitching.

Set machine as shown.



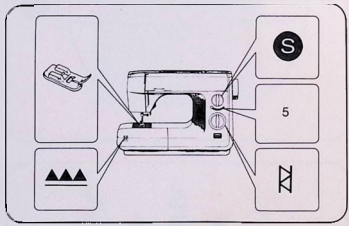
Topstitching
- Sew seams in usual manner and press.
- For topstitching hard-to-reach areas, convert machine to free arm sewing.
- Place garment right side up, under foot.
- Slowly topstitch desired areas.
- Pull threads to wrong side of fabric; tie and trim.



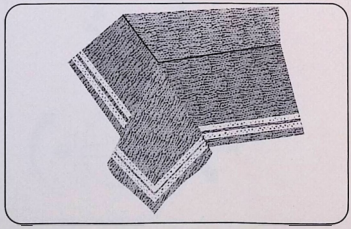
Turkish Stitch

(For Model 3214 only)
The Turkish Stitch can be used for appliqueing, joining patchwork or forming decorative hems on bed and table linens.

Set machine as shown.

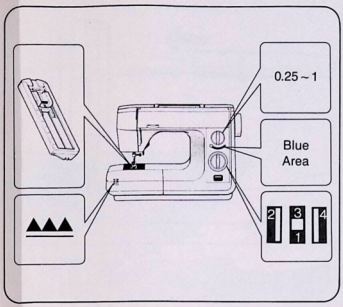


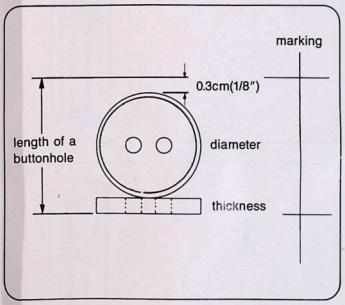
Hemstitching
- Fold a double hem of desired width and baste.
- Mark a guideline for hemstitching on right side of fabric just above top of hem edge.
- Place work, right side up with hem facing right, under presser foot.
- Lower presser foot and stitch along guideline.
- Be sure stitches on left side of line fall over hem edge (into single thickness of fabric) and stitches on right side fall into double fold of hem.



Making Buttonholes

Set machine as shown.



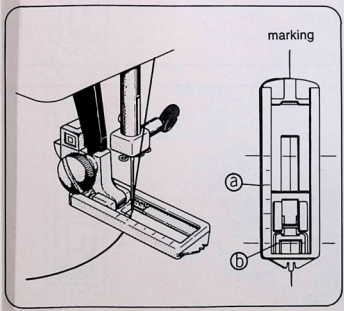


Determine Length

Measure diameter and thickness of button and add 0.3cm (1/8") for bar tacks.
Mark buttonhole size on material.

Determine Width

Determine width according in diameter of button, its thickness, and kind of material.

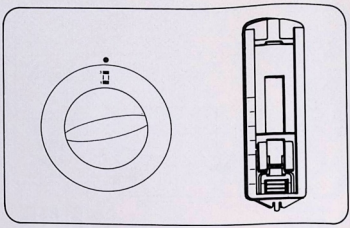


Attach buttonhole foot.
Buttonhole is made starting at bottom of foot a moves to top.

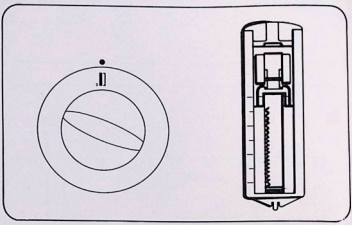
Push sliding part of buttonhole foot (a) to the back.

Place material under foot so that buttonhole marking is located in the center of foot (b).

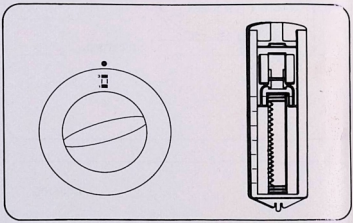
Bar tacking: Set pattern selection dial to 1 ( ) and sew 5-6 stitches.



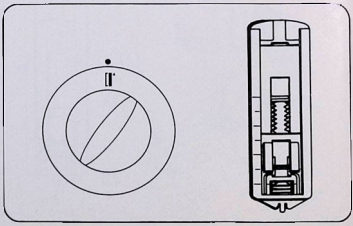
Left side: Change pattern to 2 ( ). Sew left side from front to back until it reaches desired length of buttonhole.

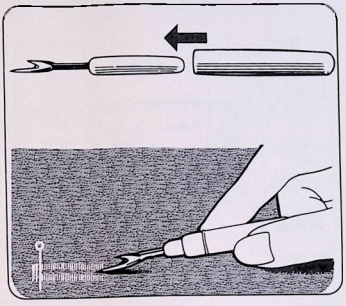


Bar tacking: Change pattern to 3 ( ) and sew 5-6 stitches.



Change pattern to 4 ( ) and sew it reaches first bar tack.





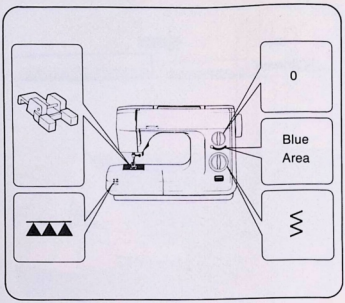
Cutting buttonholes

Stick a needle through bar tacks to prevent over-cutting.

Cut buttonhole along center with buttonhole cutter

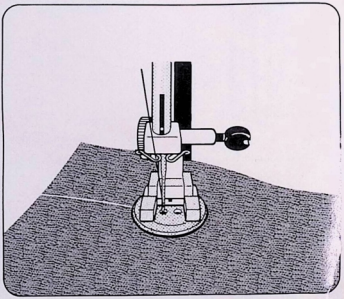
Sewing Buttons On

Set machine as shown.



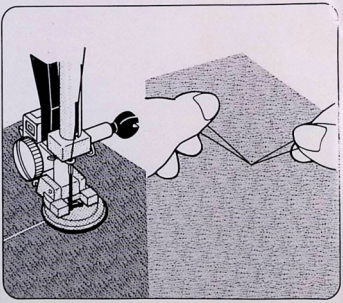
Position a button and material under foot. Adjust width in accordance to size of the holes in button. Turn handwheel slowly to adjust width.

Run machine at medium speed and sew 5-6 zig-zag stitches.



Stop machine when needle is in the highest position.

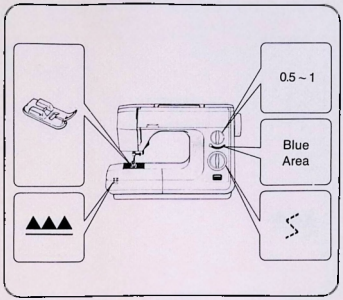
Draw out work and cut off threads.
Draw thread ends through to wrong side and tie a knot.

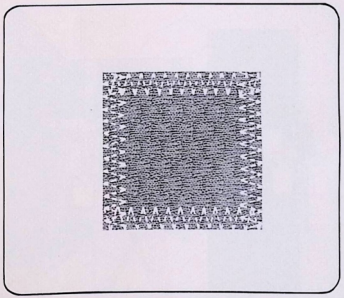


Mending

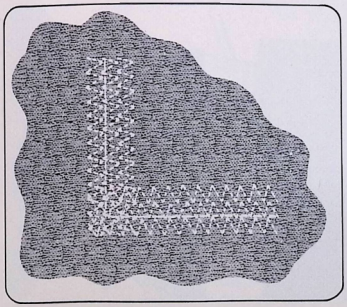
Patching

Set machine as shown.





Place the patch over the worn part. Pull thread ends toward back or left when starting sewing. Sew along the edge of the patch on the right side. Trim away the worn part close to the seam on back side.



Mending a rip

Set machine in the same way as for patching.

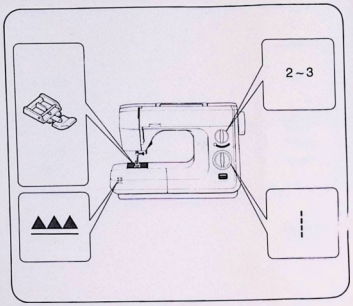
Sew the edges of tear together first. Then sew two more seams on either side.

A piece of interfacing can be placed underneath to reinforce the rip.

ZIPPER SEWING

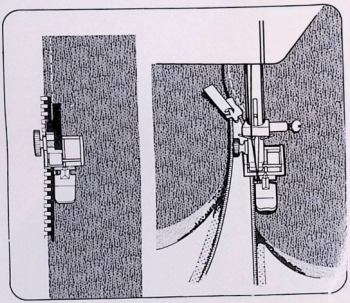
Set machine as shown.

By using special zipper foot zipper sewing can be easily done without turning fabric.



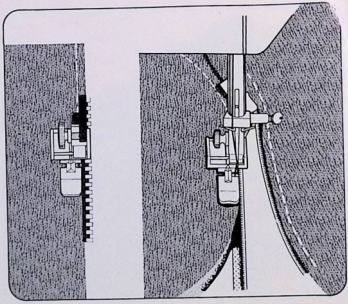
Position zipper foot to the right of the needle.

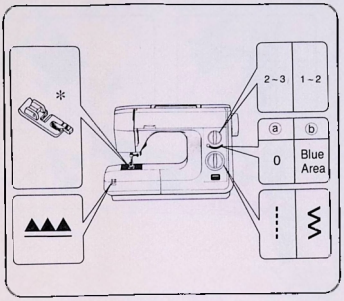
Sew right side of zipper guiding fabric carefully so that zipper teeth are parallel with left edge of foot.



Re-position zipper foot to the left of the needle.

Sew left side of zipper in the same way.





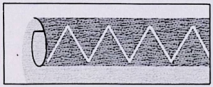
Roll Hemming

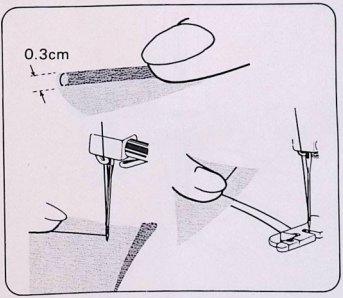
* Optional accessory (Model 3207 only).

Set machine as shown.

ⓐ With straight stitch.

ⓑ With zigzag stitch

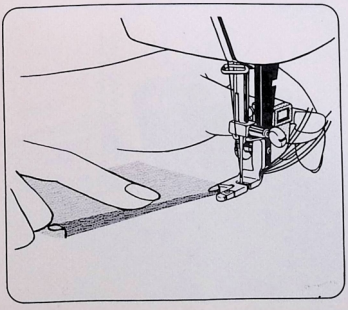




Make 0.3cm (1/8") double fold for about 5cm (2") at very edge of material, and crease it.

Sew two stitches at 0.8cm (1/4") from edge.

Pull the fabric away from the presser foot and leave about 15cm (6") of thread attached to fabric.



Place material back under presser foot and guide edge into scroll. Hold onto thread ends at the back of the fabric to start your sewing.

Sew a few stitches as shown. Keep guiding material holding raw edge about 0.6cm (1/4") in front of foot to help edge roll while sewing.

Twin Needle Threading

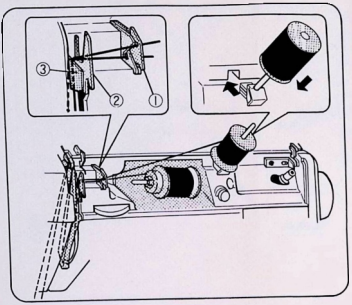
* **Twin needle is an optional accessory.**

An extra spool pin is packed in the accessory box.

Insert extra spool pin into slot and slide thread spool on.

Thread in the same manner as first thread, except at points ①, ③, ⑥ and ⑦.

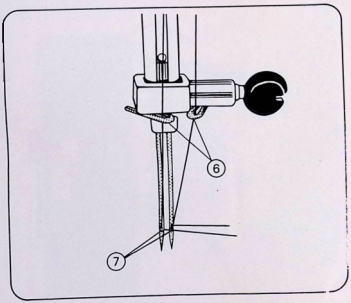
At point ①, pass thread thru guide on top.
At point ③, pass threads separately to right and left of tension plate.



At guide ⑥, pass one of threads through the right guide and the other at left guide.

At point ⑦, thread from right guide should be lead to right needle eye, and from left guide to left needle eye.

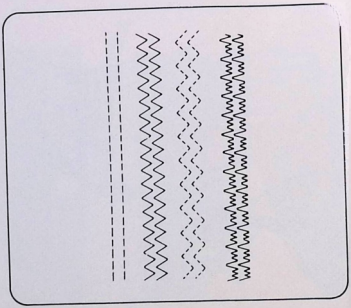
Allow about 15cm (6") of extra thread under presser foot.

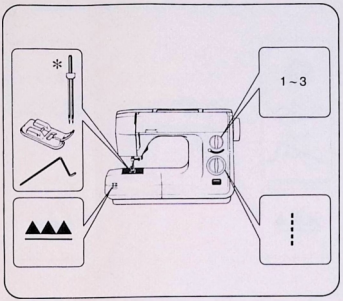


Decorative Tucks or Designs

Any stitch can be used with the twin needle for decorative effects. Most attractive are the multiple stitch zigzag and blind hem stitch for fancy tucks. The satin stitch or tapered zigzag designs in two colors are attractive for creative trims.

Caution: Stitch width should not be wider than gray zigzag graphics.



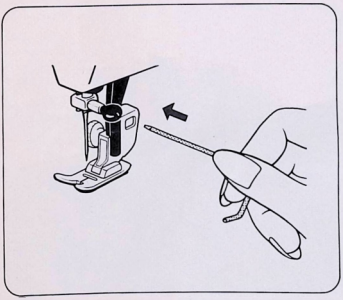


Pin Tucking

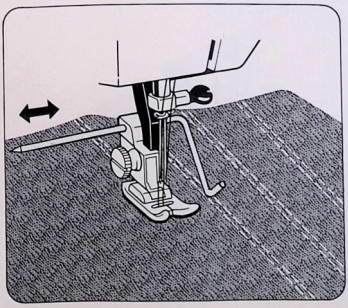
Set machine as shown.

For better appearance, use sheer material and loose upper thread a little.

For twin needle threading, see P. 33



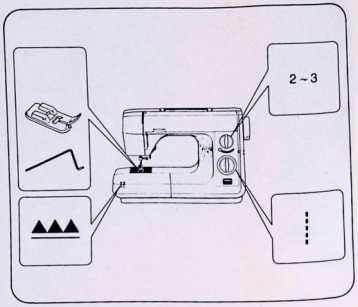
Insert the quilting guide under the spring plate on the holder.



Mark first line with pencil or tailor's chalk, and sew. From second line, just sew, following seam of fir line using guide.
Interval between seams can be adjusted by moving guide in direction of arrow.

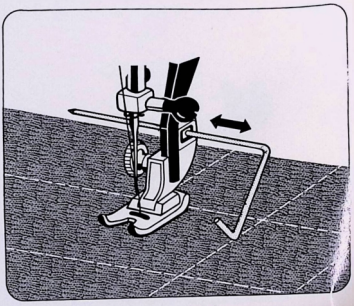
Quilting

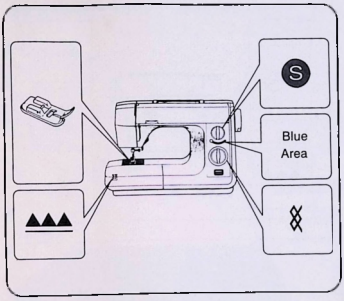
Set machine as shown.



Attach quilting guide and sew in the same manner as pin tucking.

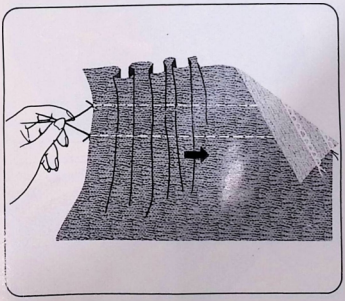
Baste layers of material to prevent them from slipping as you sew.





Smocking

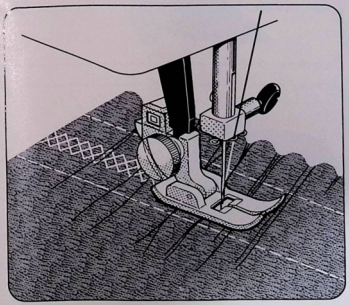
(For Model 3214 only)
Set machine as shown.



To gather fabric, sew two rows of straight stitches and very loose upper tension.

Tie knots in one end.

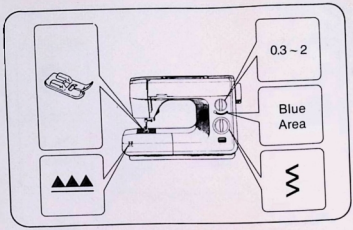
Gather fabric toward knots while holding the other end of lower threads with fingers.



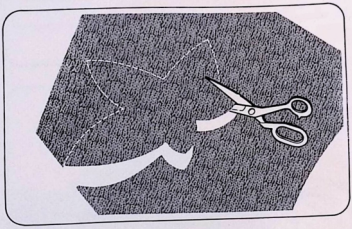
Sew the honeycomb stitch across the gathered fabric.
Remove the straight stitching threads after you finish sewing.

Applique Work

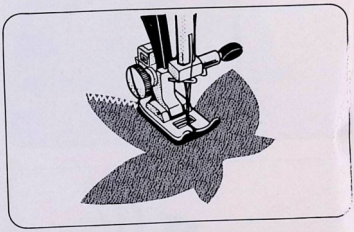
Set machine as shown.



Draw design on the material that is to be used for your applique and cut it out. Place cut-out on base material and baste it in place.

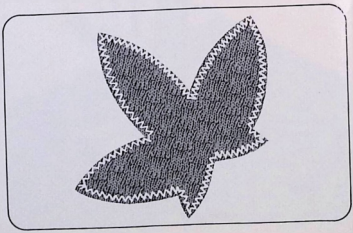


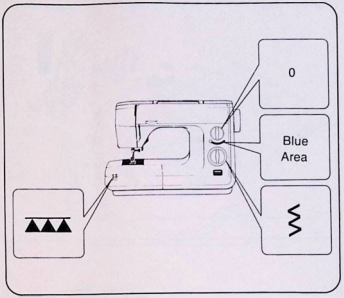
Sew around outline with zigzag stitch adjusting stitch length and width according to shape and size of cut-out.



To change direction at corners, or to sew very small circles, stop machine, positioning needle just away from edge of cut-out, make sure needle is in down position, lift presser foot and turn material.
Lower presser foot and continue sewing.

Sew a few stitches at end with zigzag width at 0. This will prevent threads form pulling out.



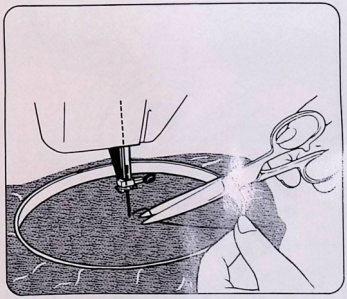


Embroidery

Set machine as shown.

Remove presser foot and shank.

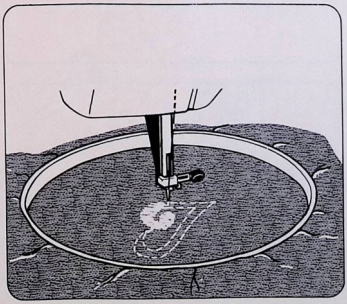
To avoid lower thread being pulled up, reduce upper thread tension.



Pull up lower thread by turning handwheel towards you while lightly, holding upper thread.

Lower presser foot lever.

Grasp lower thread then make two or three stitches. snip off excess threads.



Start sewing along outline of design with satin stitch.

Continue sewing while guiding hoop by hand.

To finish sew several stitches with zigzg width at 0°.

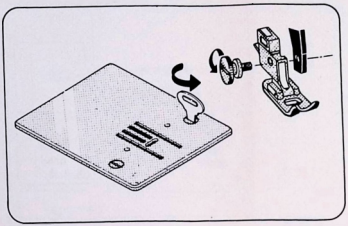
Use lightweight paper underneath when embroidering sheer fabric.

6. MAINTENANCE

Your machine requires regular cleaning and oiling for satisfactory sewing performance. A machie which is used for a few hours a day needs to be cleaned and oiled once a month.

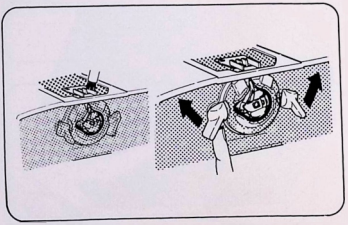
Cleaning

Remove foot and needle.
Remove needle plate.

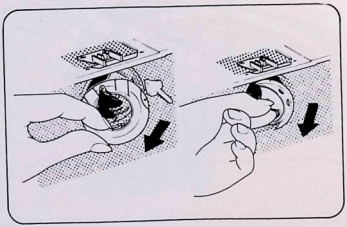


Brush off all dust and lint on feed dog with cleaning brush.

Turn latches outwards.



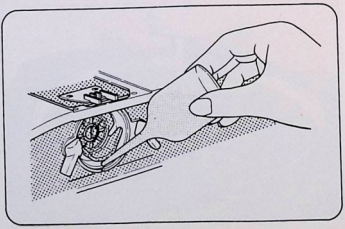
Remove shuttle race cover.
Remove shuttle. Clean shuttle race with a cleaning bursh and a soft cloth.

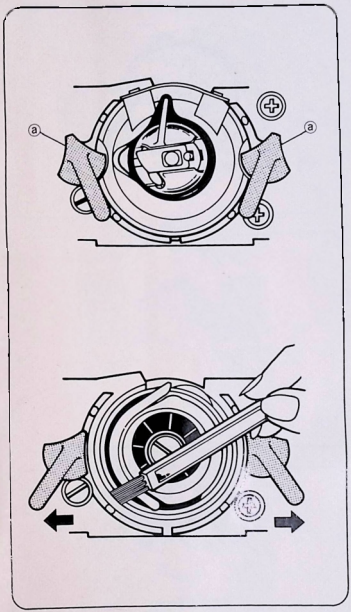


Oiling

Use SINGER oil, manufactured specially for sewing machine use. Other oils will eventually cause mechanism to jam.

Apply one drop of oil to part of shuttle where friction occurs.

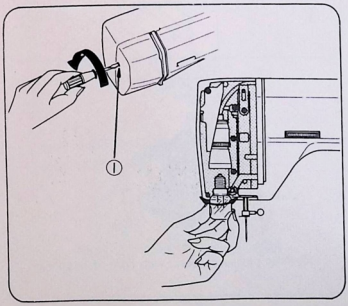




Cleaning Shuttle Case

Thread stuck between shuttle and shuttle case many cause your machine to stop running.

In this case you should proceed as follows:
① Lift presser foot and remove bobbin case.
② Push latches ⓐ towards outside and remove shuttle cover and shuttle with finger.
③ Clean shuttle and case and reassemble.



Changing Light Bulb

Unplug the machine.

Remove the screw ① on face cover as shown.
Remove cover.

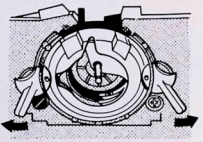
Remove bulb by unscrewing it counterclockwise.
Replace with is 15 watt bulb.
Install a new bulb by screwing it in clockwise.
Replace cover.

Lower Tension Adjustment

If skipped stitches or stitch loops occur check your bobbin tension.

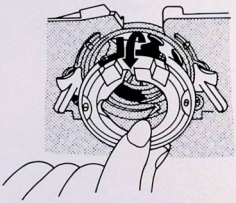
To check bobbin thread tension, suspend bobbin, bobbin case and shuttle all together by the thread as illustrated in step ④.
Move back and forth vertically (like yo yo).
Always use your original bobbin.
Thread tension adjustment is easy follow steps④, ⑤.

①



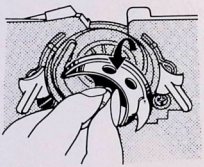
Push latches towards outside.

②



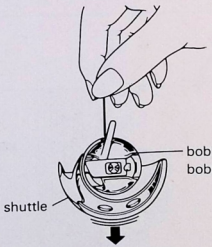
Remove shuttle cover

③



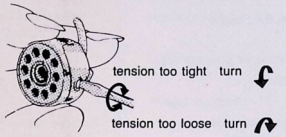
Remove shuttle

④



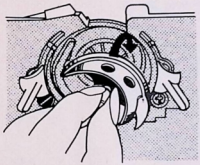
All three pieces descend with light resistance.

⑤



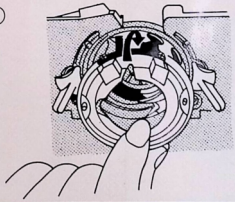
For tension adjustment, turn screw in small increments using small screwdriver.

⑥



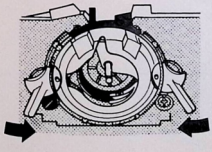
Insert shuttle

⑦



Insert shuttle cover

⑧



Push latches in to lock bobbin case in place.

7. TROUBLE CHART

PROBLEM	PROBABLE CAUSE	CORRECTION
Breaking lower thread	Thread not wound evenly on the bobbin or not drawn up correctly	P. 5
	Lower thread tension too tight	P.18
	Lint stuck in the bobbin case and inside the tension spring	Remove lint and fluff with a cleaning brush
Skipping stitches	Needle not fully inserted	P.16
	Needle bent	P.16
	Size or type of needle and thread not suitable for the material	P.17
	Incorrect upper threadin	P. 8
	Too much oil on the shuttle.	P.39
Irregular stitches	Incorrect size of needle for the material	P.17
	Upper thread tension too loose	P.18
	Incorrect lower tension	P.41
The material not feed correctly	Pattern selection dial not set correctly	P.11
	Incorrect feed dog height	P.38
	Lint stuck on the feed dog	P.39
Noisy machine	Check for thread in shuttle area, the slightest amount of thread in race may cause noise or binding, use material like tooth pick or cotton swab to clean.	P.40

PROBLEM	PROBABLE CAUSE	CORRECTION
The material puckers	Upper or lower thread tension too tight	P.18
	Stitch too long for material	P.18
	Thread too thick	P.17
	Incorrect threading of upper or lower thread	P.8,10
Breaking needle	Needle not correctly inserted	P.16
	Needle bent	P.16
	needle clamp screw too loose	P.16
	Upper thread tension too tight	P.18
	Needle too fine for the material	P.17
	Dials and levers have been changed while the needle was down int he material	P.18,20
	Zigzag width set too wide while twin needle was attached	P.35

1351009—111-A